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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/866,400	05/25/2001	Mark Cannon	70179	6238

7590 05/07/2002

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EXAMINER

PHAM, HOA Q

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 05/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

09/26/02 09:00 AM

## Office Action Summary

Application No.

09/866,400

Applicant(s)

CANNON, MARK

Examiner

Hoa Q. Pham

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-19 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20-28 is/are rejected.
- 7) ☒ Claim(s) 10-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "said transmission device" in line 12. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by DE GM 7440701 (of record).

The reference ('701) discloses an endoscope comprises an image transmission unit (2), a head (figure 2), an image deviation device (2,10, 11, 12, 13), and an illumination device (19), the head includes a web longitudinally extending along one side of the image deviation device (see figures 1 and 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over reference ('701) in view of Woo et al (6,023,368).

Regarding claims 1, 17, and 20; reference ('701) does not explicitly teach that the device can be used for inspecting solder joints. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the basic device of ('701) for inspecting the solder joints because the device would function in the same manner.

Regarding claim 2, see figure 2 of ('701) for light exits (9), which is bilateral exit next to the image deviation device (3).

Regarding claim 3, see figure 1 of ('701) for a prism (4).

Regarding claims 4-5 and 21, Figure 1 of ('701) shows that the deviation angle for the prism (4) is 90 degree.

Regarding claims 6-7, see figure 1 of ('701) for open recess tapering in the tip part.

Regarding claims 8 and 9, see optical fiber bundles 2 and 8 in figure 1 of ('701).

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6. Claims 1-9 and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami (5,170,775) in view of Oku (4,277,168) and Woo et al (6,023,368).

Regarding claims 22-28, Tagami does not explicitly teach that the prism or mirror receives the external image at substantially the farthest longitudinal distance of the head from the transmission device. However, such a feature is known in the art as taught by Oku. Oku (of record) teaches such feature, for example, in figures 1 and 2, the prism and window (4) is located at the lowest point of the head. Those of ordinary skill in the art at the time the invention was made to arrange light exit and the image deviation device as taught by Oku because this is a known arrangement, which is known to serve for the purpose of Tagami of inspecting an object.

Regarding claims 1 and 20, Tagami teaches that the endoscope is used for inspecting the interior of an automobile and does not explicitly teach that the device can be used for inspecting solder joints. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the basic device of Tagami for inspecting the solder joints because the device would function in the same manner.

Regarding claim 2, Tagami does not teach that the illuminating device from the lens head is a bilateral exit next to the image deviation device; however, such a feature is known in the art, for example as taught by Woo et al. Woo et al teach the use two semi-annular tubes (22) that located next to the image lens (14) (figures 1-3). Those of ordinary skill in the art at the time the invention was made to include in Tagami an additional light beam as taught by Woo et al. The rationale for this modification would

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have been arisen from the fact that using additional light beam would provide a better image received by the receiving unit.

Regarding claim 3, see column 4, line 32 of Tagami for a prism (23).

Regarding claims 4-5 and 21, Figure 1 of Tagami shows that the deviation angle for the prism (23) is 90 degree.

Regarding claims 6-7, see figure 1 of Tagami for open recess tapering in the tip part (18).

Regarding claims 8 and 9, see optical fiber bundles 16 and 22 in figure 1.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

8. Claims 10-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 17-19 are allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-

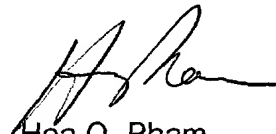
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4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

Pham/hp  
May 2, 2002

09/866,400-0956